Exhibit 52

Deposition of Hal J. Singer, Ph.D. (September 27, 2017) (excerpted)

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Page 1

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF NEVADA

- - -

IN RE: : Civil Action

DOCKET NO.

CUNG LE, NATHAN QUARRY, : 2:15-cv-01045-RFB-

JON FITCH, BRANDON VERA, : (PAL)

LUIS JAVIER VAZQUEZ and :

KYLE KINGSBURG, on behalf : CLASS ACTION

of themselves and all :

others similarly

situated,

:

Plaintiffs,

:

:

ZUFFA, LLC, d/b/a : ULTIMATE FIGHTING : CHAMPIONSHIP and UFC, :

v.

:

Defendants. :

- - -

Wednesday, September 27, 2017

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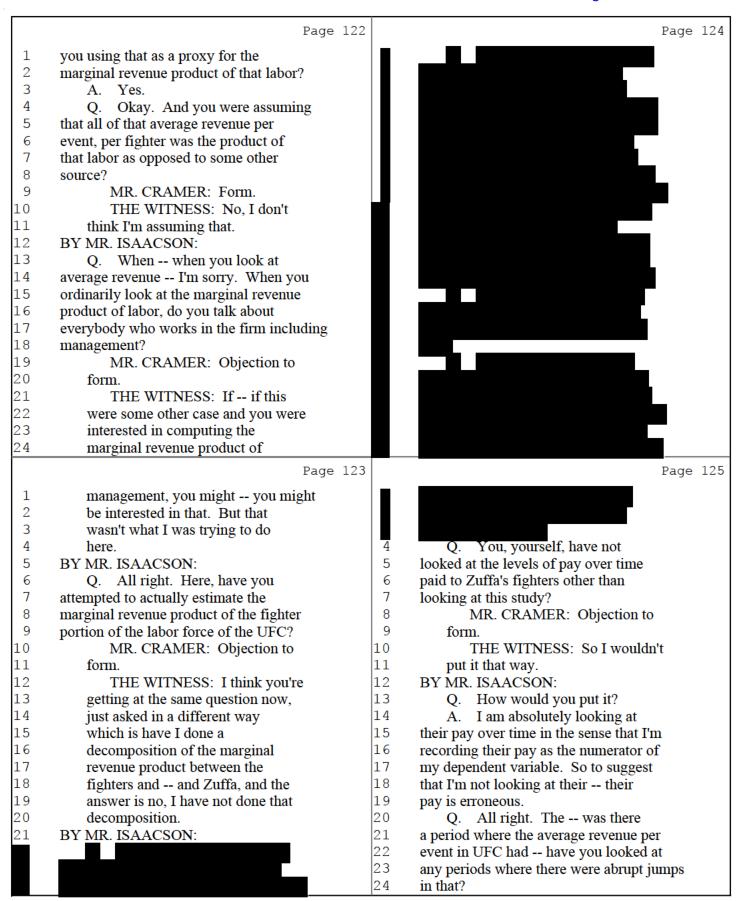
Videotaped deposition of HAL J. SINGER, Ph.D., taken pursuant to notice, was held at the law offices of Berger & Montague, P.C., 1622 Locust Street, Philadelphia, Pennsylvania 19103, beginning at 9:24 AM, on the above date, before Constance S. Kent, a Certified Court Reporter, Registered Professional Reporter, Certified LiveNote Reporter, and Notary Public in and for the Commonwealth of Pennsylvania.

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1 A. Yes. 2 Q. Okay. And what would you 3 point to me for that? 4 A. What I did, which is I I 5 calculated the average revenue per event, 6 per fighter, and I'm using that as a 7 proxy for the marginal revenue product. 8 Q. All right. If the 9 average when you look at the average 10 revenue per event, per fighter, how do 11 you determine what part of that revenue 12 is the contribution of the fighter as 13 opposed to, for example, marketing, 14 promotions, production or the work of the 15 overall firm? 16 A. So for my purposes, I don't 17 need to figure out that that 18 decomposition. I will note, however, 19 that I cite a study in my literature 20 review section that suggests that the 21 fighter is responsible for, if not all, 22 the vast majority of of the 2 BY MR. ISAACSON: 2 BY MR. ISAACSON: 3 Q. Yes. 4 A. As opposed to whether it actually happened? 6 Q. Yes. 7 A. I think I'm I'm going to 8 grant you that as a matter of theory? 8 A. I think I'm I'm going to 9 could one could add value by 10 increasing the quality of the production. 11 Q. Okay. Now, in this case, 12 you did not do an actual study yourself of the contribution of the UFC fighters to the average revenue per event; is that right? 15 magnetic fitting actually happened? 16 A. So for my purposes, I don't 17 need to figure out that that 18 decomposition. I will note, however, 19 that I cite a study in my literature 20 review section that suggests that the 21 fighter is responsible for, if not all, 22 the vast majority of of the 22 BY MR. ISAACSON:		Page 118		Page 120
2	1	onnosed to as a percentage of revenue?	1	O Well I didn't ask about the
form, to generally. For what purpose? THE WITNESS: A firm could, if a firm bills — if a law firm bills an associate out at \$400 an hour, it could express what the — what the young lawyer's salary on a hourly basis is as a — under an assumed utilization rate as a percentage of that young lawyer's bill rate. Page 119 A. Yes. Q. And you would agree with me that effective marketing and promotion could increase the average revenue per event, correct? A. Yes. MR. CRAMER: All things equal? MR. ISAACSON: MR. ISAACSON: THE WITNESS: I'm not sure what — what you mean by improving television production can increase the average revenue per event? MR. CRAMER: All things equal? MR. ISAACSON: THE WITNESS: I'm not sure what — what you mean by improving television production. BY MR. ISAACSON: Page 119 A. Yes. Q. Now, in terms of — did you anake any effort to measure the marginal revenue product of labor of UFC fighters? Page 119 A. Yes. Q. Okay. And what would you point to me for that? A. What I did, which is I — I calculated the average revenue per event, per fighter, and I'm using that as a proxy for the marginal revenue product. A. What I did, which is I — I calculated the average revenue per event, per fighter, and I'm using that as a proxy for the marginal revenue product. A. What I did, which is I — I calculated the average revenue per event, per fighter, how do you determine what part of that revenue is the contribution of the fighter as opposed to, for example, marketing, promotions, production and the urb of the correct as a proxy for the marginal revenue product. A. Soo for my purposes, I don't need to figure out that — that decomposition. I will note, however, las that cate as tay in my literature production can increase the average revenue? D. A. As opposed to feath young leaverage revenue per event? Page 119 Page 119 Page 129 Page 129 Page 129 Page 129 Page 120 A. As opposed to whether it actually happened? Q. Yes. A. Hinhink I'm — I'm going to grain you that as a matter of theory one				
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2 Q. Okay. And what would you 3 point to me for that? 4 A. What I did, which is I I 5 calculated the average revenue per event, 6 per fighter, and I'm using that as a 7 proxy for the marginal revenue product. 8 Q. All right. If the 9 average when you look at the average 10 revenue per event, per fighter, how do 11 you determine what part of that revenue 12 is the contribution of the fighter as 13 opposed to, for example, marketing, 14 promotions, production or the work of the 15 overall firm? 16 A. So for my purposes, I don't 17 need to figure out that that 18 decomposition. I will note, however, 19 that I cite a study in my literature 20 review section that suggests that the 21 ginter is responsible for, if not all, 22 the vast majority of of the 2 BY MR. ISAACSON: 3 Q. Yes. 4 A. As opposed to whether it actually happened? 6 Q. Yes. 7 A. I think I'm I'm going to grant you that as a matter of theory one could one could add value by increasing the quality of the production. Q. Okay. Now, in this case, you did not do an actual study yourself of the contribution of the UFC fighters to the average revenue per event; is that right? MR. CRAMER: Asked and answered. THE WITNESS: I think that's correct. As I noted a few moments ago, that was not necessary for my purposes. BY MR. ISAACSON:	1	A Ves	1	this as a matter of theory?
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1=- pay per view revenues mucure cuptured per construction of the contract in average revenue	23	pay-per-view revenues that are captured	23	Q. By using the average revenue
24 and not the brand. 24 per event, per fighter as a proxy, were				





			Page 292
1	studied that and I imagine for someone	1	to
2	who lives very far from the venue where	2	MR. CRAMER: Okay.
3	the live event is staged, they would not	3	MR. ISAACSON: I'm not going
	•	4	to ask him to recite all the
4 5	be considered reasonably close	5	
	substitutes.	6	documentary evidence.
6	Q. So for your input markets,		BY MR. ISAACSON:
7	what evidence did you take into account	7	Q. And I understand that
8	to assess customer's likely response to	8	there's documentary evidence that you're
9	price increase in the SSNIP analysis?	9	not reciting today.
10	And feel free to point me to the sections	10	Okay. Other than the record
11	of your report that	11	evidence of the about sub
12	A. Did you mean to say I	12	perceptions of substitutability from the
13	think you just conflated the input	13	stakeholders, what would be other parts
14	markets and customers. Maybe we should	14	of your SSNIP analysis for the input
15	start over.	15	market?
16	Q. Yes, I said price increase	16	A. I would direct you to
17	rather than wage decrease, but let me	17	Section 3A 1 for all of the evidence that
18	just put it this way: What evidence in	18	I used to inform the construction of the
19	your report did you take into account to	19	relevant input market.
20	assess the likely response to a SSNIP in	20	Q. That would be the record
21	the input markets?	21	evidence that you were referring to?
22	A. Sure. So there it's the	22	A. Well, record evidence is
23	perspective of the fighters not the	23	fairly broad, right, because it
24	customers. So I was tripping up over	24	encompasses almost everything. But I
	Page 291		Page 293
1	your	1	will point to me the what helps to
2	Q. Yes.	2	guide me to the findings that I made with
3	A injecting customers when	3	respect to the input market was the fact
4	we're talking about input markets.	4	that Zuffa was able to successfully
5	So I can take you to the	5	suppress fighter wages, wages either
6	relevant sections, and I will, but of	6	measured by by wage share, regression
7	course at high levels, I'm looking at	7	or by knowledge of the fact that wage
8	record evidence of of what fighters	8	shares were falling over time from
9	and promoters thought about substitution	9	26 percent to 18 percent, yet Zuffa did
10	possibilities as you if you were to	10	not suffer sufficient defection so as to
11	move away from Zuffa to counteract a	11	render that wage decrease unprofitable.
12	hypothetical wage cut.	12	Now, that that tells you,
13	Q. Okay. So the first thing	13	as a matter of economics, that a that
14	you looked at was record evidence of	14	a reasonable starting place for defining
15	substitution.	15	the contours of the relevant input market
16	A. Or the perception of	16	is just the fighters under Zuffa's
17	substitution from the stakeholders, the	17	control. That was the the first thing
18	fighters, the promoters, and I'll just	18	that occurred to me.
19	point you, if you	19	And once you once you
20	Q. That's that's sufficient	20	start there, you can start looking at
21	for for item 1.	21	record evidence to determine whether
22	MR. CRAMER: You asked him	22	additional fighters from from rival
23	to look at his report.	23	promotions ought to be included so that
24	MR. ISAACSON: I'm going	24	you eventually get to the smallest set of
	min, iora report. Thi going		jou eventually got to the billuliest set of



Page 294 Page 296 1 1 fighters such that a hypothetical BY MR. ISAACSON: 2 2 monopsonist could profitably exercise Q. So my actual question was --3 monopsony power. 3 I understand you're focused on that, but my question is, did you look at whether 4 Q. All right. And you said 4 5 that Zuffa was able to successfully 5 Zuffa actually suppressed actual wages? 6 suppress fighter wages -- wage share. 6 A. Without controlling for 7 7 You were talking only about the share of revenues, no. Because it's incorrect to 8 revenues there, correct? 8 do so. Correct. 9 9 Q. So in performing your SSNIP 10 analysis for the input markets, is it 11 fair to say that you relied on the record 12 evidence about the issue of perceived 13 substitution from the stakeholders along 14 with your observations that when Zuffa 15 suppressed fighter wage shares, there weren't significant defections? 16 17 A. I think -- I think that encompasses a lot. I also think that 18 19 Zuffa in its ordinary course of business 20 made use of a FightMetrics (sic) 21 database. I had -- the very first thing 22 I did when I -- when I got this case was 23 I started reading the economic literature 24 on the MMA industry, and almost every Page 295 Page 297 1 article I read, the FightMetrics (sic) 2 database formed the foundation of their 3 empirical analysis. 4 So I thought that that was a BY MR. ISAACSON: 5 reasonable place to begin to posit what 6 the smallest set of fighters that could Q. All right. But in your --6 7 7 in your hypothetical there you held be under the control of a hypothetical 8 revenues constant. Did you look at, as 8 monopsony would be in order for it to 9 9 part of your analysis of the input market exercise market power. 10 and defining that market, as to whether 10 Q. All right. Why did you use the smallest set of fighters not the Zuffa actually suppressed actual wages? 11 11MR. CRAMER: Objection to 12 12 smallest amount of promoters? 13 13 Well, because we're looking form. 14 14 BY MR. ISAACSON: at the input market. The fighters form Q. As opposed to wage share? 15 15 the elements of the input market. They 16 MR. CRAMER: Same objection. 16 happen to belong to promoters, but THE WITNESS: I'm focused on 17 17 fighters are the elements or the 18 18 wage share, of course, because ingredients. it's the right thing to look at 19 19 But I'm -- if I'm a 20 from an economic perspective. 20 fighter -- just to make it clear, if I'm 21 We're trying to measure 21 a fighter and I'm thinking about 22 exploitation, and the textbooks 22 substituting, defecting from UFC and 23 tell you to do it as a share of 23 going to a rival promotion, I don't care 24 what the name of the promotion is or 24 marginal revenue product.



	Page 298		Page 300
1	who's running it or who the chief	1	perceptions of substitutability from
2	matchmaker is, I want to make sure that	2	stakeholders, your observations about how
3	I'm going to be put inside of a pool	3	Zuffa suppressed fighter wage shares
4	of of fighters such that I have a	4	without defections or significant
5	prospect of elevating through the ranks.	5	defections, and Zuffa's reliance on the
6	It's the fighters that determine what a	6	FightMetrics (sic) database?
7	reasonable substitute is when fighters	7	MR. CRAMER: Would you like
8	are considering defecting.	8	him to look at his report, is that
9	Q. Now, you're not suggesting	9	what you're asking?
10	that Zuffa used the Fight Matrix data to	10	MR. ISAACSON: He can look
11	define a market, are you?	11	at his report in answering the
12	A. Well, you just toggled from	12	questions. I've allowed him to do
13	FightMetrics (sic) to Fight Matrix.	13	that for every question.
14	Q. I'm sorry, FightMetrics	14	MR. CRAMER: Okay, good.
15	(sic). Sorry. I was bound to do that	15	THE WITNESS: By looking at
16	today.	16	it, it refreshes my memory that in
17	But you're not suggesting	17	paragraph 101, for example, I'm
18	that Zuffa used FightMetrics (sic) data	18	looking at evidence, again from
19	to define a market?	19	the perspective of what I call
20	A. I'm suggesting that firms	20	stakeholders, or mostly fighters,
21	are not are not employed firms are	21	as to whether or not some some
22	not in the businesses of defining	22	
23	relevant product markets as the normal	23	sport outside of MMA would constitute a reasonable substitute
24	course of business, right? They're doing	24	
24	Page 299	24	to defect to in response to a wage Page 301
1	something else. Defining markets is the	1	decrease.
2	task of an antitrust economist.	2	And we can go through
3	Q. All right.	3	paragraph-by-paragraph. I don't
4	A. But I do think it's	4	know if that's how you want me to
5	important that Zuffa uses and relies on	5	use the time
6	the FightMetrics (sic) database in its	6	BY MR. ISAACSON:
7	ordinary course of business.	7	Q. I thought I thought that
8	Q. All right. And is that part	8	as encompassed within the record evidence
9	of do you consider that that	9	of perceptions of substitute billing.
10	observation that Zuffa relies on the	10	A. Right. But why I mean, I
11	FightMetrics (sic) database to be part of	11	wouldn't say why we go by my memory of
12	your SSNIP analysis?	12	what I used, we have the report and we
13	A. I think it undergirds the	13	can go paragraph-by-paragraph and I
14	conclusion that that this is the	14	can
15	relevant set of fighters that would need	15	Q. Your report is long, I'm
16	to be under the control of a hypothetical	16	trying to see if I can get a summary of
17	monopsonist so that the wage decrease	17	your conclusions with you having access
18	below competitive levels would not be	18	to your report.
19	rendered unprofitable.	19	MR. CRAMER: So he wants you
20	Q. Right. So does your SSNIP	20	to take your time and make sure
21	analysis for the input markets consist of	21	that you've adequately summarized
22	anything other than the things that	22	your conclusions and the evidence
23	you've listed so far: The record	23	upon which they're based.
24	evidence of substitution of	24	THE WITNESS: Okay.



